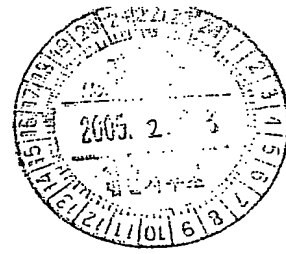


PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY



PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:
HAW, Yong-Noke

8th Fl. Songchon Bldg., 642-15 Yoksam-dong, Kangnam-gu
Seoul 135-080, Republic of Korea

Date of mailing
(day/month/year) 31 JANUARY 2005 (31.01.2005)

Applicant's or agent's file reference
04FKWM016

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/KR2004/002635

International filing date (day/month/year)
15 OCTOBER 2004 (15.10.2004)

Priority date(day/month/year)
16 OCTOBER 2003 (16.10.2003)

International Patent Classification (IPC) or both national classification and IPC

IPC7 F24C 7/02

Applicant

LG ELECTRONICS, INC. et al

1. This opinion contains indications relating to the following items:


- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR
 Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea
Facsimile No. 82-42-472-7140

Authorized officer

CHO, Byoung Do

Telephone No. 82-42-481-5475



Form PCT/ISA/237 (cover sheet) (January 2004)

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/KR2004/002635

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/KR2004/002635

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims		NO
Inventive step (IS)	Claims	1-14, 17, 19	YES
	Claims	15, 16, 18, 20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims		NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 4,421,968 B

D2: US 5,919,391 B

D1 discloses a microwave oven comprising a cooking cavity, a magnetron, a wave-guide, a rotating radiator supported on a conductor extending through an aperture in a wall of the oven.

D2 discloses a microwave oven comprising a magnetron, a wave-guide and a cooking cavity, characterized in that second and third side walls have at least one concave portion for distributing microwave, and that the oven uniformly penetrates microwave into foodstuffs in vertical and horizontal directions, thereby effectively heating the foodstuffs.

Claims 15, 16, 18 and 20 relate to a microwave oven comprising a cooking cavity, a wave-guide, a stirrer fan and a plate having forming-parts, characterized in that the oven uniformly and rapidly penetrates microwave into foodstuffs, thereby efficiently heating the foodstuffs.

Comparing claims 15, 16, 18 and 20 with D1 and D2, it would be obvious to a person skilled in the art to combine the microwave oven of D1 having a cooking cavity, a magnetron, a wave-guide, and a rotating radiator with the symmetrical concave portions of D2, thereby arriving at the invention of claims 15, 16, 18 and 20.

Therefore, claims 15, 16, 18 and 20 lack an inventive step under PCT Article 33(3).

Claims 1 and 10 are characterized by a cooking cavity having a part faced with a stirrer motor or a screw protector so as to prevent microwave from concentrating on a spot. Neither D1 nor D2 discloses said technical feature of claims 1 and 10.

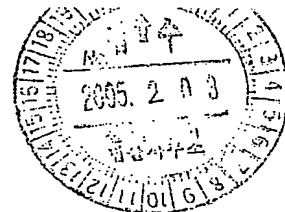
Therefore, the subject matter of claims 1 and 10 is considered to be novel and to involve an inventive step, and the subject matter of claims 2-9 and 11-14 which respectively depend on claims 1 and 10 is also considered to be novel and to involve an inventive step.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)



Applicant's or agent's file reference 04FKWM016	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/KR2004/002635	International filing date (day/month/year) 15 OCTOBER 2004 (15.10.2004)	(Earliest) Priority Date (day/month/year) 16 OCTOBER 2003 (16.10.2003)
Applicant LG ELECTRONICS, INC. et al		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II)

3. ☐ Unity of invention is lacking (See Box No. III)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 2

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

b. ☐ none of the figure is to be published with the abstract.